Formulas

Formula parsing is done using Trey Matteson's Expression object (from the "graph" example in the extended release of 3.2). The parser currently supports the following expressions :

Variables x and y (sometimes z)
Parameters a,b,c,d and t (time).
          (a-d,t can be adjusted on the Photoreal/Anim panel).
Numbers in normal, exponential, or radix (16#FE3, 2#11011) form
Simple operators +,-,*,/,% and ^. (% == modulus, ^ == pow)
Parentheses and square brackets
Constants pi and e
Trig Functions: sin(),cos(),tan(),asin(),acos(),atan()
Powers: sqrt(),pow(x,y)
Log & Exp: ln(),log(),log10(),exp() (ln, log and exp are base e)
Bessel Functions: jn(n,x), yn(n,x)
Spherical Harmonics: ylm(l,m,x,y)   (only good for l<4, -l<=m<=l)
Sums: sum(a,b,c,...)

Simple: floor(),ceil(),abs()

 (More functions can be easily added if people write and tell me what they want.)

If the expression cannot be parsed, you will be informed (instead of the equation being set to 0 as in the last version).

I have tried to add a few things to make Mathematica and C style expressions more acceptible to plot3d. Square brackets work, and capitalization in function names is ok. Whitespace is *not* interpreted as multiplication. If you have any specific suggestions on things I should add/change to increase compatibility, let me know.